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Title	Tenebrionidae from Chejudo Island, Korea (Insecta, Coleoptera)
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Citation	ESAKIA ‖ 32 ‖ p31-46
Issue Date	1992-03-31
URL	http://hdl.handle.net/2324/2555
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ESAKIA, (32): 31-46. March 31, 1992

Tenebrionidae from Chejudo Island, Korea (Insecta, Coleoptera) [1),2)]

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Abstract

Four new species, ***Caedius shoitii, Scaphidema kayokoae, Platydema koreanum*** and ***Laena chejuana*** from Chejudo Island are described and 16 species are newly recorded from the island.

Tribe PEDININI

1. Pedinus (Blindus) strigosus Faldermann

(Fig. 1A)

Pedinus strigosus Faldermann, 1835, Mem. Acad. St. Petersb. sav. etr., 2: 410 (China).

Spec. exam.: 1 ex., Shiitakegoya(800m), Mt. Hallasan, Chejudo Is., Korea, 14. vii. 1968, T. Shirozu leg.; 1 ex., Kaewol Bridge, Chejudo, Korea, 17. v. 1990, M. T. Chûjô leg.; 1 ex., Chungmun Beach, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 4 exs.(at light), Cheju Junior College Campus, Chejudo, Korea, 19. v. 1990, S. Nomura leg.; 15 exs.(at light), Cheju Junior College Campus, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (incl. Chejudo Is.); Siberia; Mongolia; N. China &Japan (Tsushima Is.).

2. *Mesomorphus villiger* (Blanchard)*

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1) Results from the Korea-Japan Co-operative Science Program on "The Evolution and Biogeography of the Insects in the East Asia". ***No. 4.***

2) Contribution from the Hikosan Biological Laboratory, Faculty of Agriculture, Kyushu University, Hikosan (Ser. 4, No. 6).

* Asterisk shows the species which has hitherto been unrecorded from the island.

(Fig. 1B)

Opatrum villiger Blanchard, 1853, Voy. Pole Sud Zool., 4: 154-155, PI. 10, Fig. 15 (New Holland).
= *asperulus* Fairmaire, 1898, Ann. Soc. Ent. Belg., 38: 20 (Samoa).
= *dermestoides* Reitter, 1904, Verh. naturf. Ver. Brünn, 42: 74 (China & Hongkong).
= *dispersus* Champion, 1894, Trans. Ent. Soc. London, (2): 361 (N.W. Australia).
= *musterinus* Fairmaire, 1882, Notes Leyden Mus., 4: 221 (tropical Africa).
= *puberulus* Fairmaire, 1867, Bull. Lii. Norm., (2)1: 187 (nota)(Madagascar).

Spec. exam.: 1 ex.(at light), Kinneikutsu, Chejudo Is., Korea, 24. vii. 1968, T. Doi, S. Hidaka, M. Nakahara, S. Hayakawa, Y. Nishida & S. Omatsu leg.

Gen. distr.: Korea (incl. Chejudo Is.); Siberia; China; Formosa; Nepal; S. E. Asia; Micronesia; Samoa; Irian Jaya; Africa; Madagascar; Australia & Japan proper.

Tribe OPATRINI

3. *Gonocephalum coenosum* Kaszab

(Fig. 1C)

Gonocephalum coenosum Kaszab, 1952, Ent. Arb. Mus. G. Frey, Mtinchen, 3(2): 454, 643-646 & 682, Abb. 413-415 [Korea(incl. Chejudo Is.); China(incl. Namoa Is. & Chusan Is.) & Japan (Honshu, Kyushu & Tsushima Is.)].

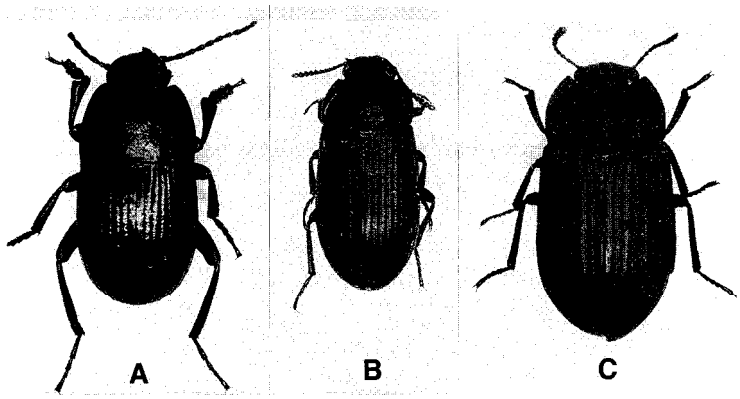


Fig. 1. A: *Pedinus (Blindus) strigosus* Faldermann. B: *Mesomorphus villiger* (Blanchard). C: *Gonocephalum coenosum* Kaszab.

Spec. exam.: 1 ex., Cheju City, 22. vii. 1968, Y. Nishida leg.; 1 ex., Cheju City, 22. vii. 1968, T. Shirôzu leg.; 1 ex., Cheju City, 23. vii. 1968, S. Hidaka leg.; 2 exs., Sogippo, 26. vii. 1968, Y. Nishida leg.; 1 ex., Songsan, Chejudo, Korea, 19. v. 1990, M. T. Chûjô leg.; 1 ex., Songsan, Chejudo, Korea, 19. v. 1990, S. Nomura leg.; 1 ex., Ora-dong, Cheju City, Korea, 27. ix. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (incl. Chejudo Is.); China (incl. Namoa Is. & Chusan Isls.); Formosa & Japan (Honshu, Shikoku, Kyushu, Tsushima Is. & Ryukyus).

4. *Gonocephalum coriaceum* Motschulsky*

(Fig. 2A)

Gonocephalum coriaceum Motschulsky, 1857, Etud. Ent., 6: 34 [Japan (Hyogo)].

Spec. exam.: 7 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 18. v. 1990, M. T. **Chûjô** leg.; 1 ex., **Chungmun, Cheju** City, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 2 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 21. v. 1990, M. T. **Chûjô** leg.; 3 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. **Chûjô** leg.; 1 ex, **Ora-dong,** Cheju City, Chejudo, Korea, 24, vii. **1990, 24.** vii. 1990, S. Nomura leg.; 17 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 28. vii. 1990, M. T. **Chûjô** leg.; 13 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. **Chûjô** leg.

Gen. distr.: Korea (mcl. Chejudo Is.); China (N.E. China to Fukien) & Japan proper.

5. *Gonocephalum koreanum* Kaszab*

(Fig. 2B)

Gonocephalum koreanum Kaszab, 1952, Ent, Arb. Mus. G. Frey, Miinchen, **3(2): 452, 549-550 &** 676 [Korea (Chemulpo)].

Spec. exam.: 1 ex., **Ora-dong,** Cheju City, Chejudo, Korea, 18. v. 1990, M. T. **Chûjô** leg.; 2 exs., **Ora-**dong, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. **Chûjô** leg.; 2 exs., **Ora-dong,** Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. **Chûjô** leg.

Gen. distr.: Korea (mcl. Chejudo Is.).

6. *Gonocephalum pubens* (Marseul)

(Fig. 2C)

Opatrum pubens Marseul, 1876, Ann. Soc. Ent. France, **(5)6:** 97-98 (Japon, Hiogo).

Spec. exam.: 35 exs., Chungmun Seashore, Chejudo, Korea, 18. v. 1990, S. Nomura leg.; 26 exs., **Chungmun,** Chejudo, Korea, 18. v. 1990, K. Morimoto leg.; 2 exs., **Songsan,** Chejudo, Korea, 19. v. **1990,** K.

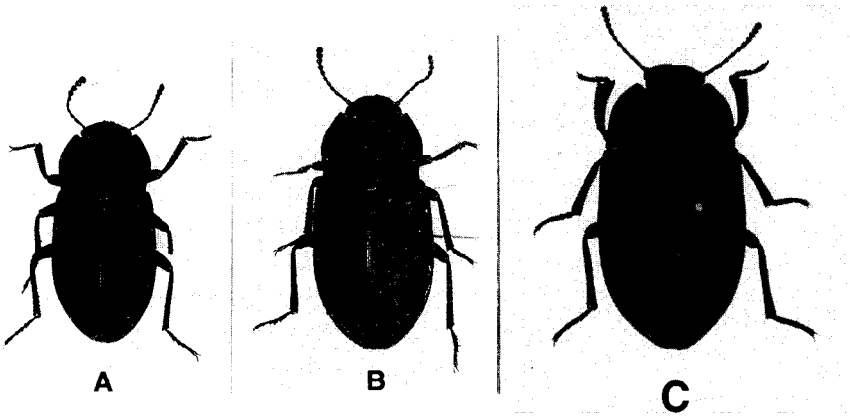


Fig. 2. A: *Gonocepharum coriaceum* Motschulsky. B: G. *koreanum* Kaszab. C: G. *pubens* (Marseul).

Morimoto leg.; 17 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (incl. Chejudo Is.): China; Formosa; India & Japan (Honshu, Shikoku, Kyushu & Awashima Is.).

Note: H. Okamoto recorded *Opatrum pubens* Marseul var. *obtusicolle* Kolbe from this island for the first time and introduced the English translation of H. J. Kolbe's original description [1924, Bull. Agr. Exper. Stat. Gov. Gen. Chosen, l(2): 183]. The authors considers that these slight differences should be included in the individual variation. This specimen accords well with the characters of this species enumerated in the key and figures in Z. Kaszab's monograph, and also with the same in the first author's key [1963, Kontyû, 31(2): 151-153].

7. *Caedius shoitii* M. T. Chûjô sp. nov.

(Fig. 3)

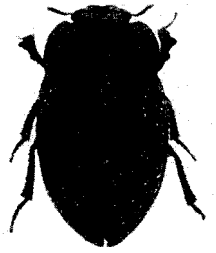
Oval, strongly convex, dark brown, 2nd to terminal segments of antennae and all tarsal segments amber brown.

Head gently convex; clypeus rugous, front margin roundly and deeply sinuate, clypeal suture shallowly depressed; frons roughly granulate, shortly and feebly expanded above eyes; gena strongly and roundly expanded outwards, vertically penetrated at frontal 1/3 of eyes; eyes obliquo-triangular in dorsal view, rounded in ventral view. Antennae short, somewhat stout, basal segment very thick, 2nd segment a little narrower than basal one, basal part of 3rd segment narrowest and then gradually thickened towards penultimate segment, ultimate segment oblong oval and a little narrower than penultimate segment; relative length of each segment (base to apex) 5 : 3 : 4 : 2 : 2 : 2 : 2 : 2 : 3 : 3 : 3. Ultimate segment of maxillary palpus securi-formed.

Pronotum somewhat transverse, gently convex, shagreened, densely granulate, densely covered with scale like hairs; front margin wholly and roundly sinuate, very narrowly marginate and weakly reflexed, front corners rounded; sides roundly expanded, narrowly marginate and weakly reflexed; hind corners angulate, hind margin somewhat triangularly producing posteriorly, middle part gently rounded, with single file of scale like hairs vertically. Prosternum strongly shagreened, densely covered with scale like hairs, prosternal process very densely covered with scale like hairs, convex between front coxal cavities, gradually widened towards posterior end of front coxal cavities, and then triangularly narrowed towards apex. Scutellum flat, semicircular, invisible in dorsal view.

Elytra strongly convex, very sharrowly striate, interstices very weakly convex, shagreened, with three tiles of scale like hairs, outer files of scale like hairs much shorter than middle ones; base slightly wider than that of pronotum, sides gently roundly widened towards 1/4 from base, and then gradually narrowed towards apex, sides with single tile of long scale like hairs, not marginate. Epipleura reaching elytral apex, covered with comparatively long scale like hairs. Mesostemum strongly depressed and shagreened, strongly raised up along middle coxal cavities. Metasternum strongly convex, widely and shallowly depressed along median line, densely granulate, evenly and sparsely covered with relatively thick scale like hairs. Abdominal sternites convex, densely granulate, with sparse scale like hairs as well as on metasternum.

Femora thick, depressed, evenly and sparsely covered with scale like hairs. Front tibiae strongly depressed, strongly widened apically, underneath with sparse protuberance; hind tibiae gradually widened towards apex, weakly bent outwards, truncate at apex. All tarsi simple, comparatively slender.



F% 3. *Caedius sboitii* sp. nov.

Length: 3.9-4.5 mm. Width 2.2-2.5 mm.

Holotype: male(preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), Chungmun Seashore, Chejudo, Korea, 18. v. 1990, S. Nomura leg. **Paratypes:** 1 male, Iho Beach, Chejudo Prov., Korea, 23. vii. 1981, Y. J. Kwon leg.; female,Iho Beach, Chejudo Prov., Korea, 23. vii. 1981, Y. J. Kwon leg.; female, Iho Beach, Cheju City, Chejudo, Korea, 26. vii. 1990, S. Miyamoto leg.

Distribution: Korea (Chejudo Is.).

This new species is closely related with *Caedius maderi* Kaszab from Kyushu, but is separated from the latter by the following characters: generally much smaller, antennae much slenderer, scale like hairs on the whole surface thicker, and whole surface much smoother.

8. *Idisia* omata Pascoe*

(Fig. 4A)

Idisia ornata Pascoe, 1866, Jour. Ent., 2: 452, t. 18, f. 8 (Japan).

Spec. exam.: 5 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, C. E. Lee leg.; 13 exs., Iho Beach, Chejudo, Korea, 26. vii. 1990, S. Miyamoto leg.

Gen. distr.: Korea (incl. Chejudo Is.); N.E. China & Japan proper.

Tribe **BOLITOPHAGINI**

9. *Boletoxenus bellicosus* (Lewis)*

(Fig. 4B)

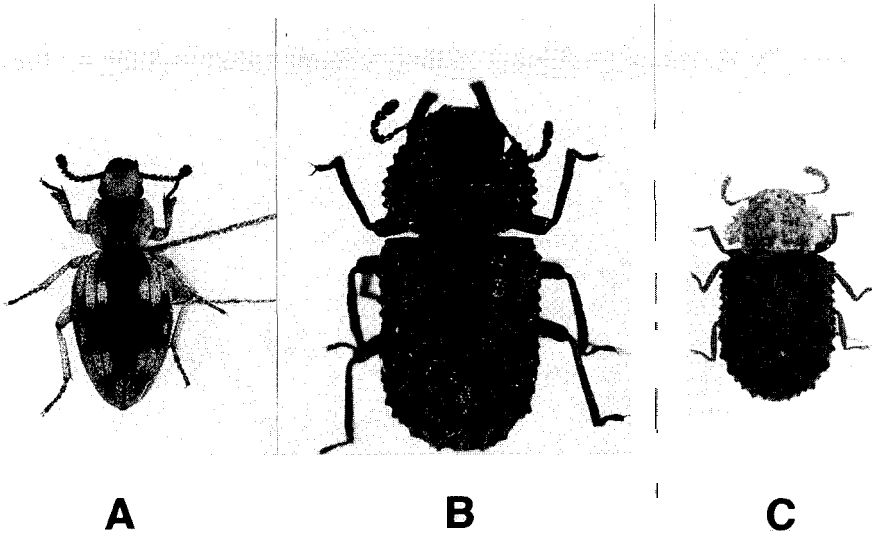


Fig. 4. A: *Idisia ornata* Pascoe. B: *Boletoxenus bellicosus (Lewis). C. Byrsax spinniceps* Lewis.

Atasthalus bellicosus Lewis, 1894, Ann. Mag. Nat. Hist., [6], 13(77): 386, Pl. 13, fig. 4 (Japan).

Spec. exam.: 4 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, M. T. Chûjô leg.; 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (Chejudo Is.) & Japan proper.

10. *Byrsax spinniceps* Lewis*

(Fig. 4C)

Byrsax spinnniceps Lewis, 1894, Ann. Mag. Nat. Hist., [6], 13(77): 388-389 [Japan (Yuyama & Nikko)].

Spec. exam.: 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, M. T. Chûjô leg.

Gen. **distr.:** Korea (Chejudo Is.) & Japan (Hokkaido, Honshu, Kyushu & Tsushima Is.).

Tribe DIAPERINI

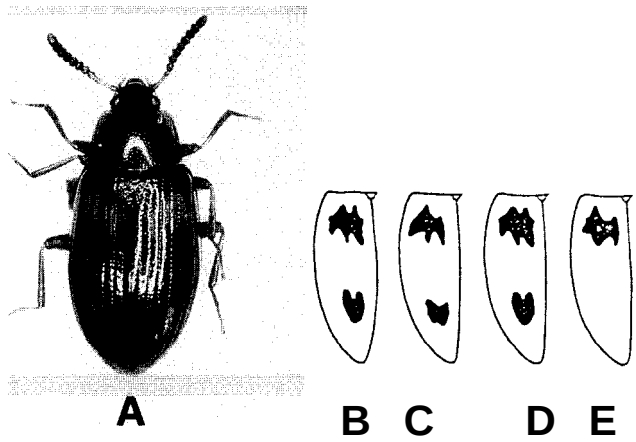
11. *Scaphidema kayokoae* M. T. Chûjô sp. nov.

(Fig. 5A-E)

Oval, mat umber, maxillae, 1st to 3rd segments of antennae, pronotal margin and legs bright umber, elytral fasciae stained yellow.

Head roundly convex, sparsely and roughly punctate; gena rather strongly convex; clypeus roughly carved, with front margin semicircular. Eyes relatively small, rounded, finely facetted. Antennae reaching middle coxal cavities, 1st segment thick, 4th to apical segments loosely clavate, 4th to penulatimate segments nearly equal to each other in shape and size, ultimate segment oblong oval, relative length of each segment (bae to apex) 5.0 : 3.0 : 5.0 : 4.5 : 4.5 : 4.5 : 4.5 : 4.5 : 4.5 : 4.5 : 7.0. Maxillarly palpus with ultimate segment nearly cylindrical, obliquely truncate at apex. Gula roughly carved, with two gular sutures gradually separating from each other towards base.

Pronotum gently and roundly convex, sparsely, irregularly and strongly punctate, transverse (5.0 : 4.5), widest at base, gently narrowed forwards; front margin shallowly sinuate, wholly and narrowly marginate, front corners rounded, sides nearly straight, narrowly marginate and roundly reflex, hind corners



Fii 5. A: *Scaphidema kayokoae* sp. nov. B-E: Individual variation of elytral markings.

rounded, hind margin roundly projected at middle 1/2, wholly and very finely marginate. Prosternum sparsely and very strongly punctate; prosternal process tongue-shaped, very finely ridged at sides, widely and deeply grooved at median part. Scutellum tongue-shaped, with surface very smooth.

Elytra relatively strongly convex, a little wider than base of pronotum at base, widest at middle part; strongly punctate-striate, 1st and 2nd of them reaching elytral apex, from 3rd to 8th of them reduced near apex, interstices gently convex, very feebly roughened, with elytral fasciae ranged from 2nd to 6th punctate-striae near base; sides narrowly marginate and reflex from shoulders to subapical parts, very finely marginate at apical 1/10. Mesosternum with sparse and pubescent punctures, with very wide V-shaped receptor of prostemal process. Metastemum roundly convex, with sparse and pubescent punctures; metepistemum very densely punctate.

Every femur gently depressed, with very shallow femoral groove at apical 2/3. Every tibia slender, slightly thickened apically. Ultimate segment of front tarsi slightly shorter than the rest put together.

Length: 3.70-4.70 mm. Width: 1.65-2.20 mm.

Holotype: male (preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg Paratypes: 13 males & 9 females, Songp'anak, Mt. Hallasan, Chejudo, Korea, 28. ix. 1990, M. T. Chûjô leg.

Distribution: Korea (Chejudo Is).

This new species is closely related with *Scaphidema discale* Lewis from Japan (Honshu), but is separated from the latter by the following characters: antennae much slenderer and relative length of each segment different (6.0 : 3.0 : 6.0 : 5.0 : 5.0 : 5.0 : 5.0 : 5.0 : 5.0 : 5.0 : 9.0) in *discale*, punctures on head and pronotum much larger, elytral base wider than pronotal one; elytral punctate-striae much deeper, side margins of elytra less expanded.

12. *Platydema koreanum* M. T. Chûjô sp. nov.

(Fig. 6)

Black to dark brown, shining, oval, strongly convex. Head finely and densely punctate, with inner ocular areas tuberculate in both sexes, sometimes horn-shaped and pointed at their apices; clypeus nearly semicircular, very feebly angulate at middle part, clypeal suture extremely fine and weakly depressed; frons concaved longitudinally; occiput roundly convex. Eyes large, oblique, strongly expanded outwards. Antennae slender, not reaching base of pronotum, relative length of each segment (base to apex) 4 : 2 : 4 : 3 : 3 : 3 : 3 : 3 : 3 : 3 : 4. Apical segments of maxillary palpus securiformed.

Pronotum finely and densely punctate, nearly trapezoidal (ca. 2 : 1), with subbasal part obliquely and weakly depressed at outer 1/3, roundly convex; anterior margin roundly sinuate, very narrowly marginate, anterior corners rounded, side margins feebly warped outwards, narrowly marginate; posterior corners rounded, posterior margin roundly produced posteriorly at median 1/3, not marginate. Prostemum densely and rugosely punctate; prosternal process oblong oval, posterior end obtusely angulate, median part narrowly and shallowly grooved. Scutellum smooth, nearly triangular, basal margin shallowly and roundly sinuate, sides roundly warped outwards, with apex sharply pointed.

Elytra strongly convex, punctate-striate, strial punctures very fine, interstices relatively strongly convex, sparrsely and finely aciculate; sides sholly and very narrowly marginate. Mesostemum deeply depressed in V-shape. Metasternum roundly convex, sparsely and finely punctate, sparsely pubescent. From

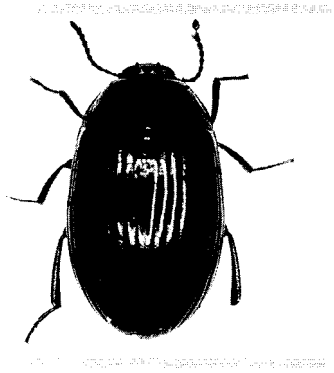


Fig. *6. Platydema koreanum* sp. nov.

1st to 3rd visible abdominal sternites densely and rugosely punctate, penultimate and terminal segments sparsely and finely punctate. All tibiae and tarsus relatively slender, densely pubescent.

Length: 5.5-7.0 mm. 3.1-4.2 mm.

Holotype: male(preserved in Ent. Lab., Kyushu Univ.), Kwang Nung, Pocheon Gun, Korea, 8. ix. 1984, K. Morimoto leg. Paratypes: 5 males & 14 females, same collecting data as holotype; 1 male & 1 female, Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.

Distribution: Korea (mcl. Chejudo Is.).

This new species is closely related with ***Platydema nigroaeneum*** Motschulsky from Japan, but is easily distinguished from the latter by the following characters: two horns on inner ocular area much shorter and thicker, punctures on whole surface larger and a little denser, and interstices of elytral punctate-striae more strongly convex.

13. *Basanus tsushimensis* M. T. Chûjô*

(Fig. 7A)

Basanus tsushimensis M. T. Chûjô, 1963, Niponius, 2(4):17-19, 2 figs. (Tsushima Is. & Korea).

Spec. exam.: ***81 exs.,*** Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.; 30 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, M. T. Chûjô leg.; 4 exs., Songp'anak, Mt. Hallasan, Chejudo, Korea, 28. ix. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (incl. Chejudo Is.) & Japan (Tsushima Is.).

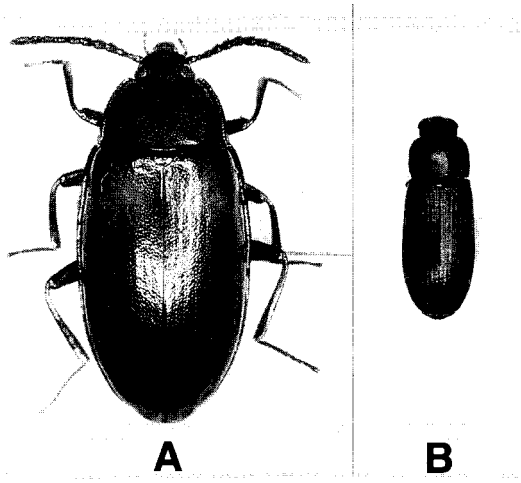


Fig. 7. A: *Basanus tsushimensis* M. T. Chûjô B: *Triborium* (*T.*) *castaneum* (Herbst).

Tribe ULOMINI

14. Tribolium (Tribolium) castaneum (Herbst)*

(Fig. 7B)

Colydium castaneum Herbst, 1797, Natursyst. Ins. Jafer, 7: 282, Pl. 112, Fig. 13 (Europe).

Spec. exam.: 1 ex., Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 14. vii. 1968, T. Shirôzu et Y. Niihida leg.

Gen. distr.: Cosmopolitan.

15. *Uloma latimanus* Kolbe*

Uloma latimanus Kolbe, 1886, Arch. f. Naturg., 52(1): 202-203, Pl. 11, Fig. 34 (Korea).

Spec. exam.: 2 exs.(at light), Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 14-15. vii. 1968, T. Shirôzu et Y. Nishida leg.

Gen. distr.: Korea (incl. Chejudo Is.) & Japan (Honshu & Tsushima Is.).

Tribe TENEBRIONINI

16. *Promethis valgipes valgipes* (Marseul)*

(Fig. 8A)

Nyctobates valgipes Marseul, 1876, Ann. Soc. Ent. France, [5]6: 117-118 (Kiu-Siu et Niphon).

= *Nyctobates villosipes* Marseul, 1876: Kaszab, 1988, Acta Zool. Hungaricae, 34(2-3): 85 (as syn. nov.).

= *Nyctobates davidis* Fairmaire, 1878: Kaszab, 1984 (design. as lectotype).

Setenis valgipes: *Lewis*, 1894, Ann. Mag. Nat. Hit., [6], 13(77): *473*.

Promethis valgipes: Kaszab, 1988, Acta Zool. Hungaricae, 34(2-3): 85 (as comb. nov.).

Spec. exam.: 2 exs., Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.; 10 exs.(at light), Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.

Gen. disk: Korea (incl. Chejudo Is.); China & Japan (Honshu, Shikoku, Kyushu & Tsushima Is.).

17. *Tenebrio obscurus* Fabricius*

(Fig. 8B)

Tenebrio obscurus Fabricius, 1792, Ent. Syst., 1: 111 (Germany).

Spec. exam.: 1 ex., Kannonji(600m), Mt. Hallasan, Chejudo Is., Korea, 11. vii. 1968, T. Shirôzu et *Y.* Nishida leg.

Gen. distr.: Cosmopolitan.

18. *Cryphaeus duellicus* (*Lewis*)'

(Fig. 8C)

Anthracias duellicus Lewis, 1894, Ann. Mag. Nat. Hist., [6], 13(78): 470, Pl. 13, Fig. 8 (Japan).

Spec. exam.: 2 exs., Mt. Hallasan, Chejudo Is., Korea, 18. xii. 1979, Y. J. Kwon leg.; 4 exs., Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.; 2 exs., Kuwangnum Temple, Mt. Hallasan, Chejudo, Korea, 29. ix. 1990, M. T. Chûjô leg.

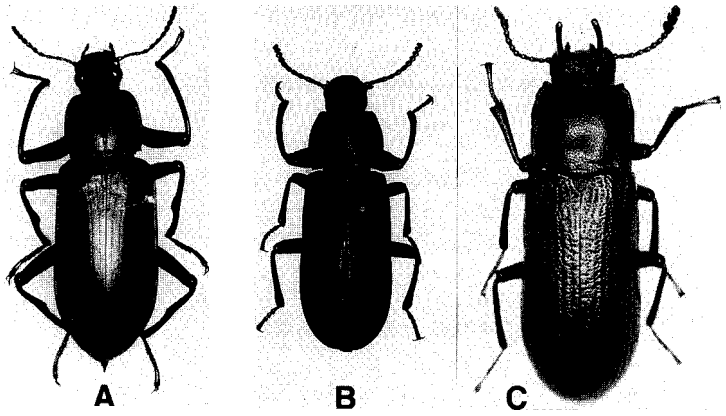


Fig. 8. A: *Promethis valgipes valgipes* (Marseul). B: *Tenebrio obscurus* Fabricius. C: *Cryphaeus duellicus* (Lewis).

Gen. distr.: Korea (Chejudo Is.) & Japan proper.

Tribe HETEROTARSINI

19. *Anaedus mroczkowskii* Kaszab*

(Fig. 9A)

Auaedus mroczkowskii Kaszab, 1968, Ann. Zool., Warszawa, 26(2): 10-11 (N. Korea).

Spec. exam.: 1 ex., Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, S. Nomura leg.; 1 ex., Mt. Hallasan, Chejudo, Korea, 25. vii. 1990, M. T. Chûjô leg.; 14 exs., Kaewol Bridge, Chejudo, Korea, 26. vii. 1990, S. Nomura leg.; 17 exs., Orimok, Mt. Hallasan, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 3 exs., Kuwangnum Temple, Mt. Hallasan, Chejudo, Korea, 29. ix. 1990, S. Nomura leg.

Gen. distr.: N. Korea & Korea (Chejudo Is.).

20. *Luprops orientalis* (Motschulsky)

(Fig. 9B)

Anaedus orientalis Motschulsky, 1868, Bull. Soc. Imp. Nat. Moscou, 41(3): 195 (Mongolia).

Luprops orientalis: Kaszab, 1983, Acta Zool. Acad. Sci. Hungaricae, 29(1-3): 137 (as comb. nov.).

= *Luprops sinensis* Marseul, 1876: Kaszab, loc. cit. (as syn. nov.).

Spec. exam.: 1 ex., Ora-dong, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. Chûjô leg.; 5 exs., Ora-dong, Cheju City, Chejudo, Korea, 28. vii. 1990, K. Morimoto leg.

Gen. distr.: Korea (mcl. Chejudo Is.); Formosa; China: Mongolia; Indonesia; Buhtan; Nepal & Japan proper.

21. *Heterotarsus carinula* Marseul*

(Fig. 9C)

Heterotarsus carinula Marseul, 1876, Arm. Soc. Ent. France, [5]6: 127(Kiu-Siu et Niphon).

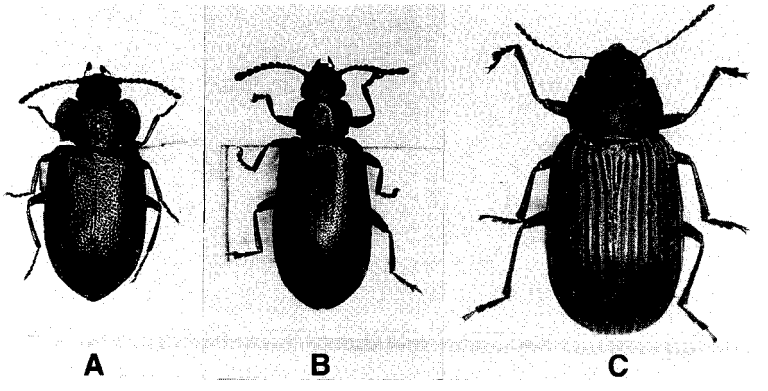


Fig. 9. A: *Anaedus mroczkowskii* Kaszab. B: *Luprops orientalis* (Motschulsky). C: *Heterotarsus carinula* (Marseul).

= *subcostatus* Reitter, 1889, Horae Soc. Ent. Rossicae, 23: 701 (China).

Spec. exam_: 1 ex., Shiitakegoya(800m), Mt. Hallasan, Chejudo, Korea, 15. vii. 1968, T. Shirôzu et Y. Nishida leg.; 6 exs., Ora-dong, Cheju City, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 14 exs., Ora-dong, Cheju City, Chejudo, Korea, 18. v. 1990, K. Morimoto leg.; 1 ex., Chungmun Seashore, Sogippo City, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 1 ex., Songsan, Chejudo, Korea, 19. v. 1990, K. Morimoto leg.; 1 ex., Ora-dong, Cheju City, Chejudo, Korea, 21. v. 1990, K. Morimoto leg.; 3 exs., Ora-dong, Cheju City, Chejudo, Korea, 21. v. 1990, M. T. Chûjô leg.; 5 exs., Ora-dong, Cheju City, Chejudo, Korea, 23. vii. 1990, M. T. Chûjô leg.; 1 ex.(light trap), Kaewol Bridge, Chejudo, Korea, 23. vii. 1990, M. T. Chûjô leg.; 2 exs., Ora-dong, Cheju City, Chejudo, Korea, 28. vii. 1990, M. T. Chûjô leg.: 6 exs., Ora-dong, Cheju City, Chejudo, Korea, 27. ix. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (incl. Chejudo Is.); China; Formosa & Japan proper.

Tribe ADELIINI

22. *Lacna chejuana* M. T. Chûjô sp. nov.

(Fig. 10A)

Brown to dark brown, lustrous, gourd-shaped, strongly constricted in middle part, wholly covered with yellow long hairs.

Head gently convex; clypeus trapezoidally produced in middle, very strongly punctate at both sides; clypeal suture strongly depressed, gena obliquely and roundly expanded, frons strongly and sparsely punctate; occiput strongly and very densely punctate, Labrum nearly quadrate, frontal corners rounded, strongly and sparsely punctate. Each mandible strongly and hook-shapedly produced forwards. Ultimate segment of maxillary palpus nearly triangular. Antennae moniliformed, stout, rather long, 1st segment very thickened, from 6th to apical segments gradually thickened, ultimate segment ovate, extremely thickened, relative length of each segment (from base to apex) 6.0 : 2.0 : 3.0 : 3.0 : 3.0 : 3.0 : 3.0 : 3.5 : 4.0 : 4.0 : 8.0.

Pronotum roundly convex, evenly, sparsely and strongly punctate; front margin nearly straight, not

marginate, frontal corners slightly angulate; sides roundly expanded, but gently tapered posteriorly and very narrowly marginate; hind corners obsolate, hind margin posteriorly rounded, not marginate. Prosrternum strongly convex, sparsely and very strongly punctate; prosternal process very strongly narrowed at anterior half, dilated and rounded at posterior half, posterior end depressed. Scutellum densely and very strongly punctate, most part covered by basal part of pronotum.

Elytra very strongly convex, very strongly striate-punctate, interstices weakly convex, with very sparse striate-punctures; basal part very strongly constricted, gradually dilated posteriorly, widest at middle part, and then tapered towards apex, apex obtusely angulate; side margins invisible from above, not marginate. Mesosternum without mesosternal groove, rather densely punctate at median part. Metasternum strongly punctate along mesocoxal cavities. Visible abdominal sternites sparsely punctate, 1st sternite relatively widened between metacoxal cavities, very strongly and roughly punctate along posterior margin; 4th sternite roundly and transversely convex. Every femora with shallow femoral groove, also with very large spine at 5/7 from base, frontal one on upper edge of femoral groove, middle and hind ones on lower edge of femoral groove. Every tibia relatively stout, weakly warped inwards, gently dilated towards apex. All tarsi simple.

Length: 3.8-5.6 mm. Width: 1.4-2.1 mm.

Holotype: male(preserved in the collection of Prof. C. E. Lee, Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo, Korea, 24. vii. 1990, S. Nomura leg. **Paratypes:** 1 female, same collecting data as holotype; 1 male, Orimok, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, S. Nomura leg.; female, Mt. Hallasan, Chejudo, Korea, 25. vii. 1990, K. Yahiro leg.

Distribution: Korea (Chejudo Is.).

This new species is related with ***Laena rotundicollis*** Marseul from Japan, but is distinguished from the latter by the following characters: punctures on whole surface much larger and sparser, inter ocular area much wider (ca. 6.4 times of the transversal diameter of the eye), and ultimate segments of antennae a little smaller.

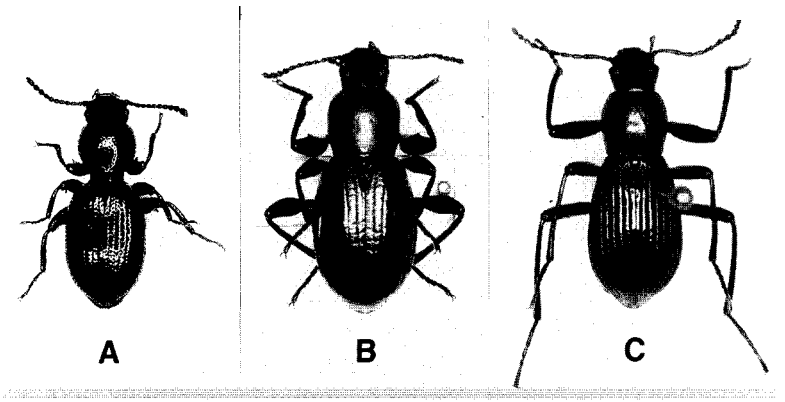


Fig. 10. A: ***Laena chejuana*** sp. nov. B: ***Misolampidius chejudoensis*** M. T. Chujo et Imasaka. C: ***Stenophanes mesostena*** Solsky.

Tribe MISOLAMPINI

23. *Misolampidius chejudoensis* IK. T. Chûjô et Imasaka

(Fig. 10B)

Misolampidius chejudoensis M. T. Chûjô et Imasaka, 1982, Esakia, (19):124-127, Figs. 2a-f (Chejudo Island).

Spec. exam.: Holotype specimen, 26 paratopotype specimens and 3 paratype spcimens; 1 ex., Orimok, Mt. HaIIasan, Chejudo, Korea, 18. v. 1990, M. T. Chûjô leg.; 3 exs., Yongshil, Mt. Hallasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.; 1 ex., Orimok, Mt. HaIIasan, Chejudo, Korea, 20. v. 1990, M. T. Chûjô leg.; 4 exs., Yongshil, Mt. HaIIasan, Chejudo, Korea, 24. vii. 1990, M. T. Chûjô leg.; 1 ex.(at light), Kaewol Bridge, Chejudo, Korea, 26. vii. 1990, M. T. Chûjô leg.; 2 exs.(banana trap), Kaewol Bridge, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 1 ex.(cup trap), Kaewol Bridge, Chejudo, Korea, 27. vii. 1990, S. Nomura leg.; 3 exs., Songp'anak, Mt. HaIIasan, Chejudo, Korea, 28. ix. 1990, M. T. Chûjô leg.

Gen. distr.: Korea (Chejudo Is.).

24. *Stenophanes mesostena* (Solsky)

(Fig. 10C)

Hedyphanes mesostena Solsky 1875, Horae Soc. Ent., 7: 376-377 (E. Siberia).

Spec. exam.: 4 exs., Shiitakegoya(800m), Mt. Hallasan, Chejudo Is., Korea, 14. vii. 1968, T. Shirôzu leg.; 2 exs., Shiitakegoya(800m), Mt. HaIIasan, Chejudo, Korea, 15. vii. 1968, T. Shirôzu et Y. Nishida leg.

Gen. distr.: Korea (mcl. Chejudo Is.); E. Siberia; E.N. China & Japan (Tsushima Is.).

Tribe STRONGYLIINI

25. *Strongylium cultellatum* Mäklin*

(Fig. 11)

Strongylium cultellatum Mäklin, 1866, Monogr. Strongylium: 345 (453)(Hongkong).

Spec. exam_: 1 ex.(at Iight), Kinneikutsu, 24. vii. 1968, T. Doi, S. Hidaka, M. Nakahara, S. Hayakawa,

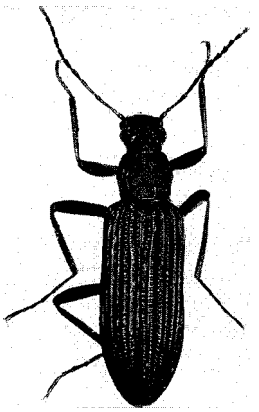


Fig. 11. A: *Strongylium cultellatum* Mäklin.

Y. Nishida & S. Omatsu leg.

Gen. distr.: Korea (incl. Chejudo Is.); Hongkong & Japan (Honshu, Tsushima Is. & Ryukyus).

Acknowledgements

We are very greateful to Director Culator Dr. Yoon Kee Kim, Senior Researcher Dr. Seong Jin Kang and Researcher Dr. Sei Ho Jung of Cheju-do Folklore and Natural History Museum, for their kind help on our collecting trip on Chejudo Island. We wish to express our appreciation to Prof. Dr. K. Morimoto, Entomological Laboratory of Kyushu University for his continual kind and valuable guidance. And also we are thankful to Assoc. Prof. Dr. 0. Tadauchi and Assist. Prof. Dr. S. Nomura of Ent. Lab. of Kyushu Univ. for various cooperations for this work.

Selected References

Cho, P. S., 1963. Insects of Querpart Island(Cheju-do). ***Hum. Sci. Korea Univ., 6:*** 159-242.

Chûjô, M. T., 1963. A new species of the genus ***Basanus*** Lacordaire from Japan and Korea (Coleoptera, Tenebrionidae), ***Niponius,*** 2(4): 17-19, 2 ***figs.***

Chûjô, M. T. et S. Imasaka, 1982. Five new species of *Misolampidius* Solsky from Japan and Korea (Coleoptera, Tenebrionidae). ***Esakia,*** (19): 123-134, Figs. 1-5.

Imasaka, S. et M. T. Chûjô, 1983-1984. On the phylogenetic and evolutional study of the genus *Misolampidius* Solsky (Coleoptera, Tenebrionidae), (l)-(11). *Gekkan-Mushi,* (1) = (148): 9-13, 5 figs. (1983); *(2)* = (149): 17-21, 4 figs. (1983); (3) = (150): 23-26, 9 figs. (1983); (4) = (151): 19-25, 32 figs. (1983); (5) = (152): 17-21, 8 figs. (1983); (6) = (153): 23-26, 16 figs. (1983); (7) = (155): 21-26, Tabs., 3a-c (1984); (10) = (161): 25-30, Figs. 23-25 (1984); (11) = (162): 2-8, figs. 26-28 (1984).

Kaszab, Z., 1952. Die indomaraischen und ostasiatischen Arten der Gattung ***Gonocephalum*** Solier (Coleoptera, Tenebrionidae). ***Ent. Arb. Mus. G. Frey,*** 3(2): l-688,511 figs.

——— 1968. Tenebrionidae und Meloidae (Coleoptera) aus Nord-Korea, gesammelt von M. Mroczkowski und A. Riedel im Jabre 1965. Ann. ***Zool., Warszawa,*** 26(2): 7-14.

——— 1983. Synonymie indoaustralischer und neotropischer Tenebrioniden (Coleoptera, Tenebrionidae). *Acta Zool. Acad. Sci. Hungaricae,* 29(1-3): 129-138.

——— 1988. Katalog und Bestimmungstabelle der gattung ***Promethis*** Pascoe, 1869 (Coleoptera, Tenebrionidae). *Acta Zool. Hungarica,* 34(2-3): Abb. 1-661, Taff. 1-16.

Kolbe, H. J., 1886. Beiträge zur Kenntnis der Coleopteren-Fauna Koreas. *Arch. f. Naturg.,* 52(1): 158-163 & 201-103, taf. 10, figs. 1-10a; Taf. 11, Figs. 34.

Lee, Y.-I. et al., 1985. Insect fauna of Mt. Halla. ***Rep. Acad. Surv., Hallasan (Mt.) Nat. Pres., Chejudo, Korea: 408.***

Okamoto, H., 1924. The insect fauna of Querpart Island (Saisiu-to). ***Bull. Agr. Exper. Stat., Gov.-Gener. Chosen,*** l(2): 183-184,1 tab., Pl. 8, Fig. 6.

Distribution of Chejudoen Tenebrionidae

localities / species	Chejudo Island	Mainland of Korea	Japan									Siberia	Mongolia	China	Formosa	Others
			Hokkaido	Honshu	Shikoku	Kyushu	Tsushima Is.	Yakushima I.	Sadogashima I.	Ryukyus	Others					
Pedinus (B.) strigosus	X						X					X				
Mesomorphus villiger	X	X	X	X	X	X	X	X				X		X	X	X
Gonocephalum coenosum	X	X		X	X	X	X			X	X			X		
G. coriaceum	X	X	X	X	X	X	X	X		X	X			X		
G. koreanum	X	X														
G. pubens	X	X		X	X	X					X			X	X	X
Caedius shoichii	X															
Idisia ornata	X	X	X	X	X	X			X					X		
Boletoxenus bellicosus	X		X	X	X	X	X	X		X						
Byrsax spinniceps	X		X	X		X	X									
Scaphidema kayokoae	X															
Platydema koreanum	X															
Basanus tsushimensis	X	X					X									
Tribolium (T.) castaneum	X			X	X	X	X			X	X					X
Uloma latimanus	X	X		X			X									
Promethis valgipes valgipes	X	X		X	X	X	X							X		
Tenebrio obscurus	X		X	X		X			X	X						X
Cryphaeus duellicus	X		X	X	X	X			X						X	
Anaedus mroczkowskii	X	X														
Luprops orientalis	X	X	X	X	X	X	X	X		X	X		X	X	X	X
Heterotarsus carinula	X	X		X	X	X	X							X	X	
Laena chejuana	X															
Misolampidius chejudoensis	X															
Stenophanes mesostena	X	X					X					X		X		
Strongylium cultellatum	X			X			X			X						X